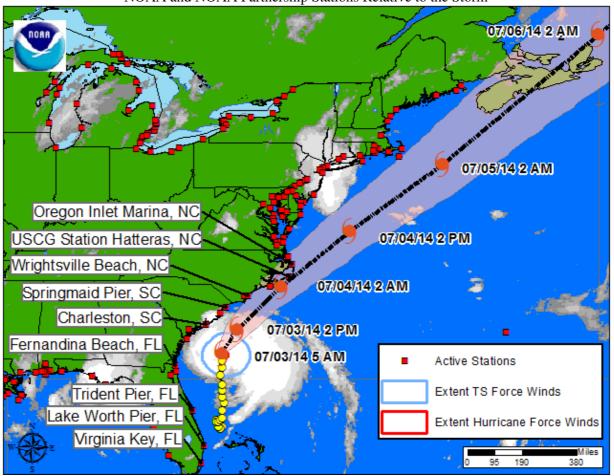


NOAA and NOAA Partnership Stations Relative to the Storm



Storm Analysis

As of 07/03/2014 06:00 EDT, water levels along Florida's eastern coast remain elevated between 0.7 and 1.2 feet above predicted tide levels. Water levels in South Carolina and North Carolina are currently ranging from 0.3 to 0.7 feet above tidal predictions with Charleston, SC a little higher at 1.2 ft above tidal predictions. Wind speeds are between 5 and 20 knots with higher gusts and are increasing in parts of North Carolina. Barometric pressure is variable and remains decreased in parts of Florida and South Carolina.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Analyst: ADW

SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

HURRICANE ARTHUR ADVISORY NUMBER 10

- ...ARTHUR NOW A HURRICANE...
- ...EXPECTED TO MOVE NEAR THE NORTH CAROLINA OUTER BANKS TONIGHT...

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY...

THE HURRICANE WARNING HAS BEEN EXTENDED NORTHWARD FROM DUCK NORTH CAROLINA TO THE NORTH CAROLINA/VIRGINIA BORDER.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A HURRICANE WARNING IS IN EFFECT FOR...

- * SURF CITY NORTH CAROLINA TO THE NORTH CAROLINA/VIRGINIA BORDER
- * PAMLICO SOUND
- * EASTERN ALBEMARLE SOUND

A HURRICANE WATCH IS IN EFFECT FOR...

* LITTLE RIVER INLET TO SOUTH OF SURF CITY

A TROPICAL STORM WARNING IS IN EFFECT FOR...

- * SOUTH SANTEE RIVER SOUTH CAROLINA TO SOUTH OF SURF CITY
- * THE NORTH CAROLINA/VIRGINIA BORDER TO CAPE CHARLES LIGHT

VIRGINIA...INCLUDING THE MOUTH OF THE CHESAPEAKE BAY

* WESTERN ALBEMARLE SOUND

A HURRICANE WARNING MEANS THAT HURRICANE CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA. PREPARATIONS TO PROTECT LIFE AND PROPERTY SHOULD BE RUSHED TO COMPLETION.

A HURRICANE WATCH MEANS THAT HURRICANE CONDITIONS ARE POSSIBLE WITHIN THE WATCH AREA. ANY DEVIATION OF THE FORECAST TRACK TO THE LEFT...OR AN INCREASE IN THE FORECAST SIZE OF ARTHUR WOULD LIKELY REQUIRE THE ISSUANCE OF HURRICANE WARNINGS FOR ALL OR PART OF THE HURRICANE WATCH AREA.

A TROPICAL STORM WARNING MEANS THAT TROPICAL STORM CONDITIONS ARE EXPECTED SOMEWHERE WITHIN THE WARNING AREA.

INTERESTS ALONG THE UNITED STATES EAST COAST NORTH OF THE WARNING AREA...PRIMARILY IN SOUTHEASTERN NEW ENGLAND...SHOULD MONITOR THE PROGRESS OF ARTHUR.

FOR STORM INFORMATION SPECIFIC TO YOUR AREA...INCLUDING POSSIBLE INLAND

WATCHES AND WARNINGS...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE.

DISCUSSION AND 48-HOUR OUTLOOK

AT 500 AM EDT...THE CENTER OF HURRICANE ARTHUR WAS LOCATED BY HURRICANE HUNTER AIRCRAFT AND NOAA DOPPLER RADARS ABOUT 340 MI SW OF CAPE HATTERAS NORTH CAROLINA AND ABOUT 190 MI SSW OF CAPE FEAR NORTH CAROLINA. ARTHUR IS MOVING TOWARD THE NORTH NEAR 9 MPH. A TURN TOWARD THE NORTHEAST WITH AN INCREASE IN FORWARD SPEED ARE EXPECTED TODAY...FOLLOWED BY A FURTHER INCREASE IN FORWARD SPEED TONIGHT AND FRIDAY. ON THE FORECAST TRACK...THE CORE OF ARTHUR IS EXPECTED TO APPROACH THE COAST IN THE HURRICANE WARNING AREA TONIGHT.

DATA FROM NOAA AND AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT INDICATE THAT MAXIMUM SUSTAINED WINDS HAVE INCREASED TO NEAR 75 MPH WITH HIGHER GUSTS. SOME ADDITIONAL STRENGTHENING IS FORECAST IN THE NEXT 24 HOURS.

HURRICANE-FORCE WINDS EXTEND OUTWARD UP TO 25 MILES FROM THE CENTER...AND TROPICAL-STORM-FORCE WINDS EXTEND OUTWARD UP TO 90 MILES.

THE LATEST MINIMUM CENTRAL PRESSURE REPORTED BY THE NOAA HURRICANE HUNTER AIRCRAFT IS 985 MB.

HAZARDS AFFECTING LAND

WIND...TROPICAL STORM CONDITIONS ARE EXPECTED TO SPREAD NORTHWARD IN THE TROPICAL STORM AND HURRICANE WARNING AREAS LATER TODAY AND TONIGHT. HURRICANE CONDITIONS ARE EXPECTED WITHIN PORTIONS OF THE HURRICANE WARNING AREA BY TONIGHT.

STORM SURGE...THE COMBINATION OF A DANGEROUS STORM SURGE AND THE TIDE WILL CAUSE NORMALLY DRY AREAS NEAR THE COAST TO BE FLOODED BY RISING WATERS. THE WATER COULD REACH THE FOLLOWING HEIGHTS ABOVE GROUND IF THE PEAK SURGE OCCURS AT THE TIME OF HIGH TIDE...

NORTH CAROLINA OUTER BANKS...2 TO 4 FT PAMLICO AND ALBEMARLE SOUNDS...2 TO 4 FT SOUTHERN NORTH CAROLINA AND NORTHEASTERN SOUTH CAROLINA...1 TO 3 FT EXTREME SOUTHEASTERN VIRGINIA...1 TO 2 FT

THE HIGHEST WATER WILL OCCUR ALONG THE IMMEDIATE COAST IN AREAS OF ONSHORE FLOW. THE SURGE WILL BE ACCOMPANIED BY LARGE AND DAMAGING WAVES. SURGE-RELATED FLOODING DEPENDS ON THE RELATIVE TIMING OF THE SURGE AND THE TIDAL CYCLE...AND CAN VARY GREATLY OVER SHORT DISTANCES. FOR INFORMATION SPECIFIC TO YOUR AREA...PLEASE SEE PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE OFFICE AND THE NEW EXPERIMENTAL POTENTIAL STORM SURGE FLOODING MAP FOR MORE DETAILS.

RAINFALL ...RAINFALL ACCUMULATIONS OF 2 TO 4 INCHES...WITH ISOLATED MAXIMUM AMOUNTS OF 6 INCHES...ARE EXPECTED OVER COASTAL AREAS OF NORTH CAROLINA THROUGH FRIDAY. RAINFALL ACCUMULATIONS OF 1 TO 2 INCHES ARE POSSIBLE ALONG THE UPPER COAST OF SOUTH CAROLINA.

TORNADOES...ISOLATED TORNADOES ARE POSSIBLE OVER PORTIONS OF COASTAL NORTH CAROLINA TODAY.

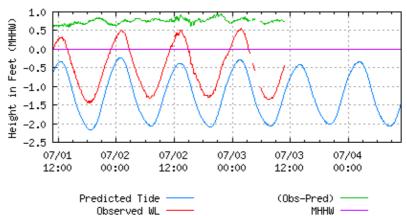
SURF...SWELLS GENERATED BY ARTHUR ARE AFFECTING AREAS FROM THE EAST-CENTRAL COAST OF FLORIDA NORTHWARD TO SOUTH CAROLINA. THESE SWELLS ARE EXPECTED TO CAUSE LIFE-THREATENING SURF AND RIP CURRENTS. FOR MORE INFORMATION...PLEASE MONITOR PRODUCTS ISSUED BY YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST OFFICE.

FORECASTER BRENNAN

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

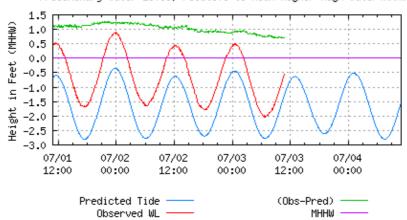
Jump to: Virginia Key - Water Level, Lake Worth Pier - Water Level, Trident Pier - Water Level, Fernandina Beach - Water Level, Fernandina Beach - Barometric, Charleston - Water Level, Charleston - Water Level, Springmaid Pier - Water Level, Springmaid Pier - Winds, Springmaid Pier - Barometric, Wrightsville Beach - Water Level, Wrightsville Beach - Winds, Wrightsville Beach - Barometric, USCG Station Hatteras - Water Level, USCG Station Hatteras - Winds, USCG Station Hatteras - Barometric, Oregon Inlet Marina - Water Level, Oregon Inlet Marina - Winds, Oregon Inlet Marina - Barometric

NOAA/NOS/CO-OPS <u>8723214 Virginia Key, FL</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)

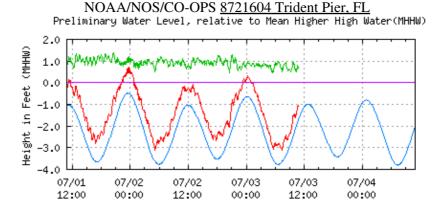


Last Observed Sample: 07/03/2014 10:54 (EDT). Data relative to MHHW Observed: -0.41 ft. Predicted: -1.14 ft. Residual: 0.73 ft. Historical Maximum Water Level: Oct 24 2005, 2.58 ft. Next High Tide: 07/03/2014 13:59 (EDT), -0.42 ft.

NOAA/NOS/CO-OPS <u>8722670 Lake Worth Pier, FL</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -0.54 ft. Predicted: -1.25 ft. Residual: 0.71 ft. Historical Maximum Water Level: Nov 23 1984, 1.88 ft. Next High Tide: 07/03/2014 12:57 (EDT), -0.63 ft.



Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -1.02 ft. Predicted: -1.69 ft. Residual: 0.67 ft. Historical Maximum Water Level: Sep 26 2004, 4.01 ft.

(Obs-Pred)

MHHW

Predicted Tide

Observed WL

Next High Tide: 07/03/2014 12:45 (EDT), -0.99 ft.

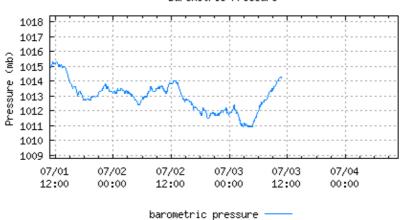
NOAA/NOS/CO-OPS 8720030 Fernandina Beach, FL Preliminary Water Level, relative to Mean Higher High Water(MHHW) 2.0 Height in Feet (MHHW) 1.0 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0 -7.0 07/01 07/03 07/02 07/02 07/03 07/04 12:00 00:00 12:00 00:00 12:00 00:00 Predicted Tide -(Obs-Pred) Observed WL MHHW

Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -2.47 ft. Predicted: -3.23 ft. Residual: 0.76 ft. Historical Maximum Water Level: Oct 2 1898, 6.94 ft. Next High Tide: 07/03/2014 13:45 (EDT), -1.17 ft.

NOAA/NOS/CO-OPS 8720030 Fernandina Beach, FL Wind Speed / Gusts / Direction 360 50 40 270 direction (true) speed (knots) 30 180 20 90 10 07/01 07/03 07/03 07/04 12:00 00:00 12:00 00:00 12:00 00:00 speed gusts direction Last Observed Sample: 07/03/2014 10:48 (EDT)

Wind Speed: 9 knots Gusts: 12 knots Direction: 277° T

$\begin{array}{c} NOAA/NOS/CO\text{-}OPS \ \underline{8720030 \ Fernandina \ Beach, FL} \\ \text{Barometric Pressure} \end{array}$



Last Observed Sample: 07/03/2014 10:48 (EDT)

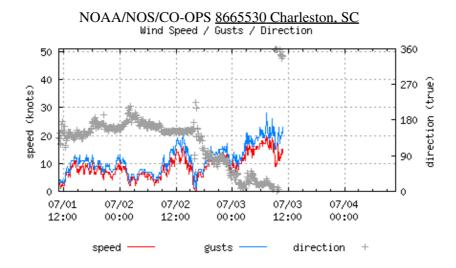
Barometric Pressure: 1014.2 mb

NOAA/NOS/CO-OPS 8665530 Charleston, SC Preliminary Water Level, relative to Mean Higher High Water(MHHW) 2.0 Height in Feet (MHHW) 1.0 0.0 -1.0 -2.0 -3.0 -4.0 -5.0 -6.0 07/02 07/02 07/01 07/03 07/03 07/04 12:00 00:00 12:00 00:00 12:00 00:00 Predicted Tide (Obs-Pred)

Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -1.37 ft. Predicted: -1.92 ft. Residual: 0.55 ft. Historical Maximum Water Level: Sep 21 1989, 6.76 ft. Next High Tide: 07/03/2014 12:54 (EDT), -1.09 ft.

MHHW

Observed WL



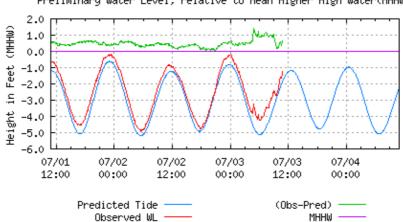
Last Observed Sample: 07/03/2014 10:48 (EDT) Wind Speed: 15 knots Gusts: 21 knots Direction: 342° T

NOAA/NOS/CO-OPS <u>8665530 Charleston</u>, <u>SC</u> Barometric Pressure

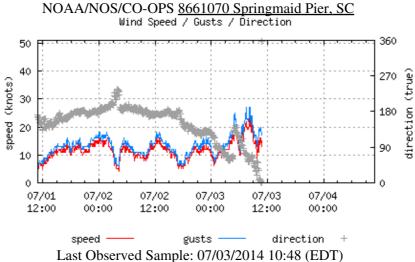


barometric pressure ——
Last Observed Sample: 07/03/2014 10:48 (EDT)
Barometric Pressure: 1009.3 mb

NOAA/NOS/CO-OPS <u>8661070 Springmaid Pier, SC</u>
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -1.21 ft. Predicted: -1.85 ft. Residual: 0.64 ft. Historical Maximum Water Level: Jan 1 1987, 3.65 ft. Next High Tide: 07/03/2014 12:36 (EDT), -1.17 ft.



Wind Speed: 15 knots Gusts: 18 knots Direction: 358° T

NOAA/NOS/CO-OPS 8661070 Springmaid Pier, SC Barometric Pressure 1018 1017 1016 1015 1014 1013 1012 1011 1010 1009 07/01 07/02 07/02 07/03 07/03 07/04 00:00 12:00 12:00 00:00 12:00 00:00

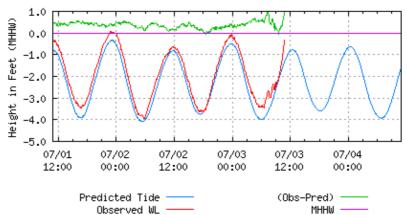
Pressure (mb)

Last Observed Sample: 07/03/2014 10:48 (EDT)

Barometric Pressure: 1011.9 mb

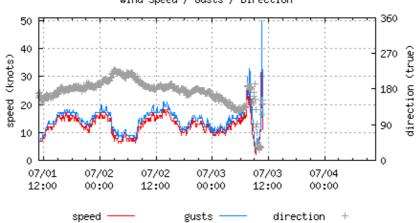
barometric pressure

NOAA/NOS/CO-OPS <u>8658163 Wrightsville Beach, NC</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



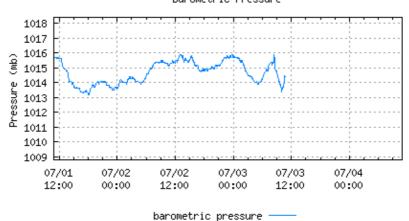
Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -0.32 ft. Predicted: -1.32 ft. Residual: 1.00 ft. Historical Maximum Water Level: Sep 25 2008, 2.81 ft. Next High Tide: 07/03/2014 12:28 (EDT), -0.78 ft.

NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC Wind Speed / Gusts / Direction



Last Observed Sample: 07/03/2014 10:48 (EDT) Wind Speed: 11 knots Gusts: 16 knots Direction: 143° T

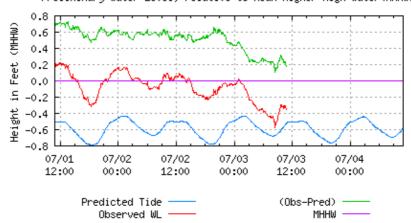
NOAA/NOS/CO-OPS 8658163 Wrightsville Beach, NC Barometric Pressure



Last Observed Sample: 07/03/2014 10:48 (EDT)

Barometric Pressure: 1014.4 mb

NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatterss</u>, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW)

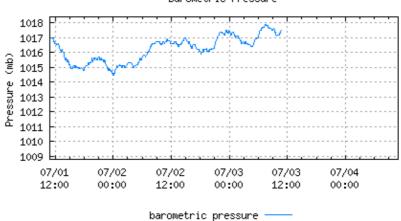


Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -0.34 ft. Predicted: -0.52 ft. Residual: 0.18 ft. Historical Maximum Water Level: Oct 29 2012, 4.15 ft. Next High Tide: 07/03/2014 14:01 (EDT), -0.49 ft.

NOAA/NOS/CO-OPS 8654467 USCG Station Hatteras, NC Wind Speed / Gusts / Direction 360 50 40 270 direction (true) speed (knots) 30 180 20 90 10 Ô 07/01 07/02 07/02 07/03 07/03 07/04 12:00 00:00 12:00 12:00 00:00 00:00 speed gusts direction

Last Observed Sample: 07/03/2014 10:48 (EDT) Wind Speed: 13 knots Gusts: 18 knots Direction: 159° T

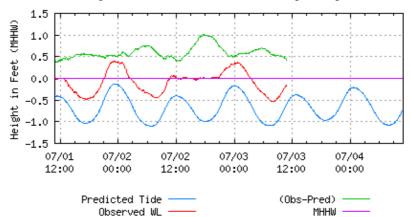
NOAA/NOS/CO-OPS <u>8654467 USCG Station Hatteras, NC</u> Barometric Pressure



Last Observed Sample: 07/03/2014 10:48 (EDT)

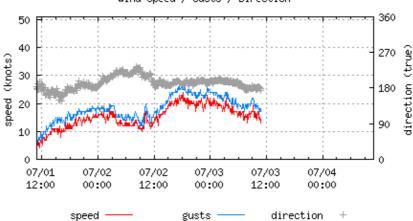
Barometric Pressure: 1017.5 mb

NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina, NC</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



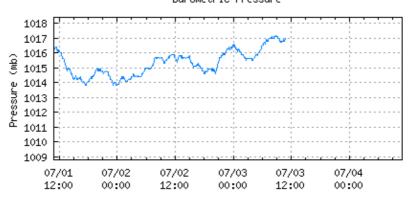
Last Observed Sample: 07/03/2014 10:48 (EDT). Data relative to MHHW Observed: -0.15 ft. Predicted: -0.59 ft. Residual: 0.44 ft. Historical Maximum Water Level: Aug 28 2011, 6.32 ft. Next High Tide: 07/03/2014 12:46 (EDT), -0.38 ft.

NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina</u>, NC Wind Speed / Gusts / Direction



Last Observed Sample: 07/03/2014 10:48 (EDT) Wind Speed: 13 knots Gusts: 17 knots Direction: 178° T

NOAA/NOS/CO-OPS <u>8652587 Oregon Inlet Marina, NC</u> Barometric Pressure



barometric pressure —— Last Observed Sample: 07/03/2014 10:48 (EDT)

Barometric Pressure: 1017.0 mb

Latest Water Level Observations on MHHW

| Station ID | Station Name | Date/Time | Observed Water Level | Predicted Tide | Residual Water Level | 24 Hour Maximum Storm Tide |
|------------|---------------------------|---------------------------|----------------------------|-------------------|----------------------------|-------------------------------------|
| 8723214 | Virginia Key, FL | 07/03/2014 10:54 (EDT) | -0.41 ft | -1.14 ft | 0.73 ft | 0.55 ft |
| 8722670 | Lake Worth Pier, FL | 07/03/2014 10:48 (EDT) | -0.54 ft | -1.25 ft | 0.71 ft | 0.50 ft |
| 8721604 | Trident Pier, FL | 07/03/2014 10:48 (EDT) | -1.02 ft | -1.69 ft | 0.67 ft | 0.33 ft |
| 8720030 | Fernandina Beach, FL | 07/03/2014 10:48 (EDT) | -2.47 ft | -3.23 ft | 0.76 ft | 0.07 ft |
| 8665530 | Charleston, SC | 07/03/2014 10:48 (EDT) | -1.37 ft | -1.92 ft | 0.55 ft | 0.11 ft |
| 8661070 | Springmaid Pier, SC | 07/03/2014 10:48 (EDT) | -1.21 ft | -1.85 ft | 0.64 ft | -0.16 ft |
| 8658163 | Wrightsville Beach, NC | 07/03/2014 10:48 (EDT) | -0.32 ft | -1.32 ft | 1.00 ft | -0.05 ft |
| 8654467 | USCG Station Hatteras, NC | 07/03/2014 10:48 (EDT) | -0.34 ft | -0.52 ft | 0.18 ft | 0.09 ft |
| 8652587 | Oregon Inlet Marina, NC | 07/03/2014 10:48 (EDT) | -0.15 ft | -0.59 ft | 0.44 ft | 0.37 ft |

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce